

## DNA TECHNICAL REVIEW

Upon completion of a case, a second qualified examiner will give the entire case package a technical review and agree with the interpretation of the data before the report is issued. The reviewer will examine the case to ensure that case notes and report are written according to the guidelines set forth in this document. The reviewer must date and initial the examiner's submission sheet upon approval of reported conclusions. The analyst and the technical reviewer must also complete and sign the review sheet (DOC ID [1797](#)). Refer to the Division Quality Assurance Manual for additional information. Portions of the case package may also be technically reviewed by a second qualified examiner prior to the report being written or prior to some parts of the DNA analysis process being completed (e.g. during a pre-amplification technical review or during a DNA batch technical review). A pre-amplification technical review involves a review of all of the data necessary to ensure a successful amplification. This review will include a review of the quantitation and concentration data and the amplification setup form to ensure that no transcription errors are present and that an analyst is not carrying through/amplifying a sample that they should take the remaining 50% of, etc. Pre-amplification technical review is required for all casework data with the exception of rush casework when a second analyst is unavailable to perform this check; offender sample processing is also excluded from the pre-amplification technical review requirement. A batch technical review involves a review of various information that will be included in every case packet for that batch of cases; this review includes the lot number and expiration date log form, the 3130 plate setup form, the epMotion plate setup log (if applicable), the GMIDX allelic ladder summary, and the electropherograms for the amplification positive and negative controls. In addition, the batch technical reviewer will check the raw 3130 data and injection times for the entire batch project. If a case package has had a DNA batch and/or pre-amplification technical review completed, the final technical reviewer is not responsible for reviewing anything that has already been technically reviewed as part of these processes.

### **The following is a list of items to be reviewed (where applicable) during technical review:**

- Received from evidence date correct in report (per case notes)
- Control numbers correct
- Agency control numbers added
- All items from request are analyzed or a reason why not is included
- Evidence description page filled out and corresponds to blue sheet request (or any description discrepancies noted)
- Separation in time between reference and evidence extraction clearly defined
- All reagent lot numbers and expiration dates
- Extract information form filled out
- Qiacube log reports included and correct, if applicable
- Extracted DNA / post extraction substrate preserved when an insufficient amount of the evidence sample remains for independent testing; disposition is stated in the report

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- Reagent blanks run concurrently with evidence samples using the same conditions as evidence samples
- All calculations
- Quantitation plate setup form included
- Quantitation includes: slope,  $R^2$  value, Y intercept and meets requirements
- Standard curve utilized to determine sample concentrations meets requirements. Compare standard curve and Plexor HY Forensic Report data table.
- Quantitation plate blank run
- Samples containing less than the optimal amplification target amount of total DNA have been concentrated
- If symbols are used in quantitation, these symbols are defined in a key
- Amplification information checked appropriately
- Amplification positive and negative controls run and acceptable
- 3130 plate setup form included
- epMotion plate setup log included and correct, if applicable
- Allelic ladders and size standard acceptable
- Raw data to include injection times
- All OL's are labeled and true OL's have been re-injected (if necessary for interpretation)
- Table of results contains accurate interpretation and transcription of electropherograms
- Alleles below 75 RFU (Yfiler) coded and this code will be noted.
- Key to interpretation table included
- Popstats transcription correct per interpretation and consistent with report
- U.S. Y-STR database transcription correct
- Searcher transcription correct
- All items, including those not analyzed described in report
- Evidence disposition reported
- Match estimation documentation if utilized
- The necessary CODIS statement(s) in report
- Necessary CODIS eligibility justification information included in packet
- Results clearly written and potentially understandable to our client
- Kits utilized described in the report
- Contamination log completed, if applicable
- Chain of custody for each item of evidence received or created

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